

REMARKS

This application has been reviewed in light of the Office Action dated August 16, 2010. Claims 1, 7, 8, 10, 11 and 16 are pending in the application, of which Claims 1, 8, 10, 11 and 16 are independent. Reconsideration and further examination is respectfully requested.

Claims 1, 7, 8, 10 and 15 are rejected under 35 U.S.C. § 103 as being unpatentable over U.S. Publication 2001/0013953 (Uekusa) in view of JP-9037092 (Shoji) and further in view of U.S. Publication 2003/0026478 (Jones) and U.S. Publication No. 2002/0036665 (Shima). Claims 11 and 16 are rejected under 35 U.S.C. § 103 as being unpatentable over Uekusa, in view of U.S. Patent No. 5,812,283 (Tachibana) and further in view of Shoji, Jones and Shima. Reconsideration and withdrawal of this rejection are respectfully requested.

The present claims concern correcting compressed image data based on attributes extracted from the compressed image data either before or during decompression of the image data. In one aspect, image data corresponding to a non-print region in a borderless print mode is not used to correct the image. Specifically, a feature amount of image data corresponding to the non-print region is excluded from a feature amount used in correction of image data to be printed so as to print a high quality image in the borderless print mode. To accomplish this, the feature amount for the correction is acquired after processing data corresponding to the non-print region is completed, thus the feature amount of image data corresponding to the non-print region is excluded from the feature amount for correction.

Turning to specific claim language, independent Claim 1 is directed to an image processing apparatus. The apparatus includes: a corrector, arranged to apply, to image data stored in a band memory or a block memory assigned to a memory area, a first correction according to a feature amount of the entire image data, and a second correction which is different from the first correction, wherein the image data is decompressed from JPEG-compressed image data; a processor, arranged to apply an image process required to print on a print medium to the image data output from the corrector; and a recorder, arranged to print an image on the print medium in a borderless print mode based on the image data output from the processor, wherein the corrector acquires the feature amount using a histogram acquired from a DC component of a minimum coded unit before execution of the first correction and before execution of the second correction is completed for the entire image data, and after a process of data corresponding to a non-print region in the borderless print mode is completed so that a feature amount of image data corresponding to the non-print region is excluded from the feature amount acquired by the corrector, and wherein the minimum coded unit includes the DC component and AC components which are obtained between the decompression of the JPEG-compressed image data.

Applicants respectfully submit that the cited references, namely Uekusa, Shoji, Jones and Shima, considered either alone or in combination, fail to disclose or suggest the features of Claim 1. In particular, the cited references, either alone or in combination, fail to disclose or suggest at least the feature of acquiring a feature amount using a histogram acquired from a DC component of a minimum coded unit before execution of a first correction and before execution of a second correction is completed for

the entire image data and after processing data corresponding to a non-print region in the borderless print mode is completed so that a feature amount of image data corresponding to the non-print region is excluded from the acquired feature amount.

In contrast to the present claims, Uekusa describes color balance correction as indicated in Figs. 12A to 12C. Fig. 12A indicates an ideal color solid, Fig. 12B indicates a color solid of input image data having a gray line shifted from a gray line of the ideal color solid. See Uekusa, paragraph [0051]. Fig. 12C indicates a color solid of the image data on which the color balance correction is performed. See Uekusa paragraph [0053]. Applicants submit that the gray line may be considered a feature amount of the image data; however, Uekusa does not disclose a borderless print mode. Therefore, Uekusa cannot possibly disclose acquiring a feature amount using a histogram acquired from a DC component of a minimum coded unit before execution of a first correction and before execution of a second correction is completed for the entire image data and after processing data corresponding to a non-print region in the borderless print mode is completed so that a feature amount of image data corresponding to the non-print region is excluded from the acquired feature amount.

In addition, while Jones may disclose generating a histogram of DCT coefficients analyzing coefficients corresponding to spatial frequencies (for example, DC coefficient and AC 3 coefficients). However, as in Uekusa, Jones does not disclose such processing in the context of borderless printing.

Shoji merely discloses that each area of RAM is sequentially released based on a printing state of intermediate code information of each color stored in each area of the RAM. As such, Shoji is not seen to cure the deficiencies of Uekusa and Jones.

Shima discloses that a non-printing region is determined in a marginless print mode. According to Shima, a preset expanded printing region is printed; however, the front end portion of this expanded printing region is set as a non-printing region. A printer receives a printing command and treats the non-printing region as having no print data, that is, as having "null" data values. Thus, only a paper-feed-side portion extending from the front end of the necessary minimum printing region is printed. See Shima, paragraph [0067]. However, Shima fails to disclose or suggest acquiring a feature amount using a histogram acquired from a DC component of a minimum coded unit before execution of a first correction and before execution of a second correction is completed for the entire image data and after processing data corresponding to a non-print region in the borderless print mode is completed so that a feature amount of image data corresponding to the non-print region is excluded from the acquired feature amount.

However, in a device in accordance with the present claims, a feature amount is used to perform the first and second corrections and the feature amount of a non-print region of an image to be printed in a borderless print mode is excluded, thus the feature amount is acquired after processing of the data of the non-print region is completed. Therefore, when the borderless print mode is performed, the feature amount using a histogram acquired from a DC component of a minimum coded unit (i) before execution of the first correction and (ii) before execution of the second correction is completed for the entire image data, and (iii) after the processing of the data corresponding to the non-print region is completed. Such a feature is not at all disclosed or suggested by any permissible combination of Uekusa, Shoji, Jones and Shima.

In light of the deficiencies of Uekusa, Shoji, Jones and Shima, Applicants submit that independent Claim 1 is in condition for allowance and respectfully request same.

Independent Claims 8, 10, 11 and 16 are directed to a method, computer-readable medium, a printer and an inkjet printer, respectively, substantially in accordance with the apparatus of Claim 1. Accordingly, Applicants submit that Claims 8, 10, 11 and 16 are also in condition for allowance and respectfully requests same.

The other pending claims in this application are each dependent from the independent claims discussed above and are therefore believed allowable for the same reasons. Because each dependent claim is also deemed to define an additional aspect of the invention, however, the individual consideration of each on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, the entire application is believed to be in condition for allowance, and such action is respectfully requested at the Examiner's earliest convenience.

## CONCLUSION

Any necessary fees are being paid concurrently herewith. The Director is hereby authorized to credit any fee overpayment, or charge any fee underpayment, to Deposit Account No. 06-1205.

Applicants' undersigned attorney may be reached in our Costa Mesa, CA office at (714) 540-8700. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted

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